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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/052,443	01/23/2002	Hans-Henning Zutz	31624-177199	1950

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EXAMINER

KYLE, MICHAEL J

ART UNIT	PAPER NUMBER
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3676

DATE MAILED: 02/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/052,443

Applicant(s)

ZUTZ, HANS-HENNING

Examiner

Michael J Kyle

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-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 3 recites the limitation "said free radial end" in line 2 of the claim. There is insufficient antecedent basis for this limitation in the claim. The examiner believes this should read --aid free axial end--.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Reinsma (U.S. Patent No. 4,256,316). Reinsma discloses a slide ring seal assembly comprising a slide ring (26) having an axially extending annular leg (23), the leg having radially outer and radially inner circumferential surfaces and a free axial end, and a plurality of circumferentially spaced recesses (25) provided in the leg (23) at the free axial end thereof, each recess extending from the radially outer surface to the radially inner surface. Reinsma also discloses an annular sealing body (21)

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surrounding the leg and being seated thereon, and a plurality of circumferentially spaced radially inward oriented extensions (shown in figure 2) forming part of the annular sealing body and projecting into respective recesses provided in the leg for affecting a form locking connection between the slide ring and the annular sealing member.

6. With respect to claims 2 and 3, Reinsma discloses the slide seal ring wherein at least one of the recesses continues with an axially extending undercut (shown in figure 2) provided in the leg, and further wherein at least one of the radially inward oriented extensions continues with an axial projection received by the undercut. Reinsma also discloses that the leg (23) has at the free axial end, on the radially outer surface, a circumferentially extending enlargement (24).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morely et al (U.S. Patent No. 4,421,327) in view of Reinsma. Morely et al discloses a slide ring assembly comprising a slide ring (56) having an axially extending annular leg (shown in figure 4), the leg having radially outer and radially inner circumferential surfaces and a free axial end, a plurality of spaced recesses provided in the leg (between lugs 74, figure 5), and an annular sealing body (60) surrounding the leg and being seated thereon. Morely et al also discloses that the leg has, at the free axial end, on the radially outer surface, a circumferentially extending enlargement (shown in figure 4).

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9. Morely et al does not disclose the recesses extending from the radially outer surface to the radially inner surface, a plurality of circumferentially spaced, radially inward oriented extensions forming part of the annular sealing body and projecting into respective recesses in the leg, or that at least one of the recesses continues with an axially extending undercut provided in the leg and that at least one of the radially inward oriented extensions continues with an axial projection received by the under cut.

10. Reinsma teaches a slide ring assembly with a slide ring having an axially extending annular leg (23), a plurality of recesses (25), each recess extending from the radially outer surface to the radially inner surface, a plurality of circumferentially spaced, radially inward oriented extensions (figure 2) forming part of the annular sealing body and projecting into respective recesses in the leg, and that at least one of the recesses continues with an axially extending undercut (figure 2) provided in the leg with at least one of the radially inward oriented extensions continuing with an axial projection received by the undercut for improved distributed securing of the seal ring (sealing body) to the stiffener (slide ring) (column 3, lines 33-36). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Morely et al as taught by Reinsma in order to improve the securing of the sealing body to the slide ring.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

12. The following references are cited to further show the state of the art with respect to slide ring seal assemblies: Olsson, Quartara, Deuring, Wentworth, Livesay et al, Bedford, and Zutz.

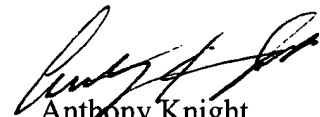
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13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J Kyle whose telephone number is 703-305-3614. The examiner can normally be reached on Monday - Friday, 8:30 am - 5:00 pm.

14. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 703-308-3179. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9326 for regular communications and 703-872-9327 for After Final communications.

15. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-2168.

mk
February 22, 2003


Anthony Knight
Supervisory Patent Examiner
Tech Center 3600